

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

#### **F. Inspection and Entry**

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Water Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

#### **G. Bypass**

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
  - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

#### H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

### **B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

### **C. Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

### **III. STANDARD PROVISIONS – MONITORING**

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

### **IV. STANDARD PROVISIONS – RECORDS**

- A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

**B. Records of monitoring information shall include:**

- 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

**C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):**

- 1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data.  
(40 C.F.R. § 122.7(b)(2).)

## **V. STANDARD PROVISIONS – REPORTING**

### **A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Water Code, § 13267.)

### **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below.  
(40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA).  
(40 C.F.R. § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

- c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

#### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date.  
(40 C.F.R. § 122.41(l)(5).)

#### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order.  
(40 C.F.R. § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order.  
(40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

#### **F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 40 C.F.R. 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(l)(2).)

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

#### **I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

### **VI. STANDARD PROVISIONS – ENFORCEMENT**

- A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

### **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

#### **A. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.  
(40 C.F.R. § 122.42(b)(3).)

## ATTACHMENT E – MONITORING AND REPORTING PROGRAM

### Table of Contents

Attachment E – Monitoring and Reporting Program (MRP).....	E-1
I. General Monitoring Provisions.....	E-1
II. Monitoring Locations .....	E-2
III. Influent Monitoring Requirements.....	E-2
A. Monitoring Location INF-001.....	E-2
IV. Effluent Monitoring Requirements .....	E-3
A. Monitoring Location EFF-001.....	E-3
V. Whole Effluent Toxicity Testing Requirements .....	E-4
VI. Discharge to Emergency Storage Pond .....	E-8
A. Monitoring Location PND-001 .....	E-8
VII. Land Discharge Monitoring Requirements – Not Applicable .....	E-8
VIII. Reclamation Monitoring Requirements - Not Applicable .....	E-8
IX. Receiving Water Monitoring Requirements – Surface Water.....	E-8
A. Monitoring Location RSW-001 and RSW-002.....	E-8
X. Other Monitoring Requirements.....	E-9
A. Biosolids .....	E-9
B. Ultraviolet Disinfection System .....	E-10
C. Municipal Water Supply .....	E-10
XI. Reporting Requirements.....	E-11
A. General Monitoring and Reporting Requirements.....	E-11
B. Self Monitoring Reports (SMRs) .....	E-12
C. Discharge Monitoring Reports (DMRs) .....	E-14
D. Other Reports .....	E-15

### List of Tables

Table E-1. Monitoring Station Locations .....	E-2
Table E-2. Influent Monitoring.....	E-2
Table E-3. Effluent Monitoring .....	E-3
Table E-4. Chronic Toxicity Testing Dilution Series.....	E-6
Table E-5. Discharge to Emergency Storage Pond Requirements (PND-001).....	E-8
Table E-6. Receiving Water Monitoring Requirements.....	E-8
Table E-7. Ultraviolet Disinfection System Monitoring Requirements.....	E-10
Table E-8. Municipal Water Supply Monitoring Requirements.....	E-10
Table E-9. Monitoring Periods and Reporting Schedule.....	E-14
Table E-10. Reporting Requirements for Special Provisions Progress Reports.....	E-15

## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001	Influent enters the headwork, 39°, 14', 02" N, 121°, 13', 11" W
001	EFF-001	Treated effluent discharge into Deer Creek 39°, 14', 00" N, 121°, 13', 22" W
--	RSW-001	Deer Creek, 70 feet upstream from point of discharge
--	RSW-002	Deer Creek, 100 feet downstream from the point of discharge
--	PND-001	Emergency Storage Pond
--	UVS-001	UV Disinfection System
--	BIO-001	Biosolids
--	SPL-001	Water Supply Source Water

## III. INFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF-001 as follows:

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
BOD 5-day 20°C	mg/L, lbs/day	24-hr Flow Proportional Composite	1/week	1
Total Suspended Solids	mg/L, lbs/day	24-hr Flow Proportional Composite	1/week	1

<sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Board.

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location EFF-001

1. The Discharger shall monitor treated wastewater at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

**Table E-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Levels
Flow	mgd	Meter	Continuous	1
Total Residual Chlorine <sup>2</sup>	mg/L	Meter	Continuous	1
Temperature <sup>3</sup>	°F	Grab	1/day	1
pH	standard units	Grab	1/day	1
BOD 5-day 20°C	mg/L	24-hr Composite <sup>4</sup>	3/week	1
Total Suspended Solids	mg/L	24-hr Composite <sup>4</sup>	3/week	1
Total Coliform Organisms	MPN/100 mL	Grab	3/week	1
Ammonia Nitrogen, Total (as N) <sup>5</sup>	mg/L	Grab	1/week	1
Nitrate + Nitrite Nitrogen (as N)	mg/L	Grab	1/week	1
Nitrite (as N)	mg/L	Grab	1/week	1
Hardness (as CaCO <sub>3</sub> ) <sup>6</sup>	mg/L	Grab	1/month	1
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month	1
Total Dissolved Solids	mg/L	Grab	1/quarter	1
Dibromochloromethane <sup>7</sup>	µg/L	Grab	1/month	1
Dichlorobromomethane <sup>7</sup>	µg/L	Grab	1/month	1
Mercury, Total Recoverable	µg/L	Grab	1/quarter	Method 1631 <sup>9</sup>
	lbs/day	Calculated <sup>8</sup>		
Methylmercury	µg/L	Grab	1/quarter	Method 1630 <sup>9</sup>
Carbon tetrachloride	µg/L	Grab	1/quarter	1
Diquat	µg/L	Grab	1/quarter	1
MBAS	µg/L	Grab	1/quarter	1
Copper, Total Recoverable	µg/L	Grab	1/quarter	1
Silver, Total Recoverable	µg/L	Grab	1/quarter	1
Standard Minerals <sup>10</sup>	mg/L	Grab	1/year	1
Alpha BHC, Aldrin, and Gamma BHC (lindane) <sup>11</sup>	µg/L	Grab	1/year	1
Other Priority Pollutants <sup>12,13</sup>	µg/L	14	15	1

### Footnotes for Table E3

- <sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
- <sup>2</sup> Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L. (see also Section VII.D., Compliance Determination). Monitoring for chlorine is in effect until the Discharger submits written certification that a chlorine-based disinfection system is no longer in use and chlorine containing chemicals are not added to the treatment process for wastewater discharge to surface waters.
- <sup>3</sup> A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
- <sup>4</sup> 24-hour flow proportioned composite.
- <sup>5</sup> Monitoring for ammonia shall be concurrent with acute whole effluent toxicity monitoring. See Section V.A.1. Temperature and pH shall be recorded at the time of ammonia sample collection.
- <sup>6</sup> Hardness samples shall be collected concurrently with metals samples.
- <sup>7</sup> Monitoring for dibromochloromethane and dichlorobromomethane is in effect until the Discharger submits written certification that a chlorine-based disinfection system is no longer in use, chlorine byproducts are no longer present, and chlorine containing chemicals are not added to the treatment process for wastewater discharge to surface waters.
- <sup>8</sup> The monthly average loading for mercury shall be calculated using the average monthly effluent flow volume and the monthly average mercury concentration.
- <sup>9</sup> Unfiltered methylmercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in USEPA method 1669: *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by USEPA method 1630/1631 (Revision E) with a method detection limit of 0.02 ng/L for methylmercury and 0.2 ng/L for total mercury.
- <sup>10</sup> Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
- <sup>11</sup> Detection limits shall be equal to or less than the lowest minimum level published in Appendix 4 of the SIP.
- <sup>12</sup> For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.
- <sup>13</sup> Concurrent with receiving surface water sampling.
- <sup>14</sup> Volatile samples and bis(2-ethylhexyl)phthalate shall be grab samples, the remainder shall be 24-hour composite samples.
- <sup>15</sup> Priority pollutants shall be sampled quarterly only during the third year following the date of permit adoption and shall be conducted concurrently with up stream receiving water monitoring for hardness (as CaCO<sub>3</sub>) and pH. The Discharger is not required to conduct effluent monitoring for priority pollutants that have already been sampled in a given quarter, as required in Table E-3.

## **V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform semi-annual acute toxicity testing, concurrent with effluent ammonia sampling.
2. Sample Types – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the

discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.

3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition and its subsequent amendments or revisions. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. **Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform semi-annual three species chronic toxicity testing.
2. Sample Types – Effluent samples shall be flow proportional 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location specified in the Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in the Monitoring and Reporting Program.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
  - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
  - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
  - The green alga, *Selenastrum capricornutum* (growth test).
5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 and its subsequent amendments or revisions.

6. **Reference Toxicant** – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. **Dilutions** – The chronic toxicity testing shall be performed using the dilution series identified in Table E-5, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic or is dry upstream of the discharge). In such cases, laboratory control water may be used as the diluent.
8. **Test Failure** –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
  - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
  - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in VI.C.2.a.iii.)

**Table E-4. Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water <sup>1</sup>	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

<sup>1</sup> If receiving water is toxic or if Deer Creek is dry upstream of the discharge, laboratory water will be used for the dilution series as described in EPA method 821-R-02-013 Section 7.12.

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board on the schedule for semi-annual sampling described in Table E.9, and shall contain, at minimum:

- a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC<sub>50</sub>, 100/EC<sub>25</sub>, 100/IC<sub>25</sub>, and 100/IC<sub>50</sub>, as appropriate.
- b. The statistical methods used to calculate endpoints;
- c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
- d. The dates of sample collection and initiation of each toxicity test; and
- e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:

- a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
- b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
- c. Any information on deviations or problems encountered and how they were dealt with.

## VI. DISCHARGE TO EMERGENCY STORAGE POND

### A. Monitoring Location PND-001

1. The Discharger shall monitor plant effluent discharged to the Emergency Storage Pond as follows:

**Table E-5. Discharge to Emergency Storage Pond Requirements (PND-001)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Daily <sup>1</sup>	
Freeboard	Feet	Visual	Daily	
Odors		Observation	Daily	

<sup>1</sup> Report total flow for each day when wastewater is discharged to the emergency storage pond.

## VII. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

## VIII. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE

## IX. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

### A. Monitoring Location RSW-001 and RSW-002

1. The Discharger shall monitor Deer Creek at RSW-001 and RSW-002 as follows:

**Table E-6. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow <sup>1</sup>	mgd	Calculated	1/week	<sup>2</sup>
Dissolved Oxygen	mg/L	Grab	1/week	<sup>2</sup>
pH	Standard Units	Grab	1/week	<sup>2</sup>
Temperature	°F (°C)	Grab	1/week	<sup>2</sup>
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/week	<sup>2</sup>
Turbidity	NTU	Meter	1/week	<sup>2</sup>
Radionuclides	pCi/L	Grab	1/year	
Floating or suspended matter	Narrative	Visual	1/week	
Discoloration	Narrative	Visual	1/week	
Bottom Deposits	Narrative	Visual	1/week	
Aquatic Life	Narrative	Visual	1/week	

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Visible films, sheens	Narrative	Visual	1/week	
Fungi, slimes, or objectionable growths	Narrative	Visual	1/week	
Potential nuisance conditions	Narrative	Visual	1/week	
Foam	Narrative	Visual	1/week	

<sup>1</sup> At RSW-001 only.

<sup>2</sup> As per 40 CFR Part 136

## X. OTHER MONITORING REQUIREMENTS

### A. Biosolids

#### 1. Monitoring Location BIO-001

- a. A composite sample of sludge shall be collected annually at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants listed in 40 CFR section 122 Appendix D, Tables II and III (excluding total phenols).
- b. Sampling records shall be retained for a minimum of **five years**. A log shall be kept of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis for part of the annual report.
- c. Upon removal of sludge, the Discharger shall submit characterization of sludge quality, including sludge percent solids and quantitative results of chemical analysis for the priority pollutants listed in 40 CFR 122 Appendix D, Tables II and III (excluding total phenols). Suggested methods for analysis of sludge are provided in USEPA publications titled "Test Methods for Evaluating Solid Waste: Physical/Chemical Methods" and "Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater". Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR 136.6.3(e). Other guidance is available in USEPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989.

## B. Ultraviolet Disinfection System

### 1. Monitoring Location UVS-001

- When the Ultraviolet Disinfection system is installed and becomes operational the Discharger shall monitor UVS-001 as follows:

**Table E-7. Ultraviolet Disinfection System Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow rate	mgd	Meter	Continuous
Turbidity <sup>1</sup>	NTU	Meter	Continuous
Number of UV banks in operation	Number	Meter	Continuous
UV Transmittance	Percent (%)	Meter	Continuous
UV Power Setting	Percent (%)	Meter	Continuous
UV Dose <sup>2</sup>	MW-sec/cm <sup>2</sup>	Calculated	Continuous

<sup>1</sup> Report daily average turbidity and maximum. If the influent exceeds 10 NTU, collect a sample for total coliform and report the duration of the turbidity exceedance.

<sup>2</sup> Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. For the daily minimum UV dose, also report associated number of banks, gallons per minute per lamp, power settings, and UV transmittance used in the calculation. If effluent discharge has received less than the minimum UV dose and is not diverted from discharging to Deer Creek, report the duration and dose calculation variables associated with each incident.

## C. Municipal Water Supply

### 1. Monitoring Location SPL-001

The Discharger shall monitor the Municipal Water Supply at SPL-001 as follows. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Municipal water supply samples shall be collected at approximately the same time as effluent samples.

**Table E-8. Municipal Water Supply Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	1/year	
Electrical Conductivity @ 25°C <sup>1</sup>	µmhos/cm	Grab	1/year	
Standard Minerals <sup>2</sup>	mg/L	Grab	1/year	<sup>2</sup>

<sup>1</sup> If the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations.

<sup>2</sup> Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

## XI. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.
5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136 for priority pollutant constituent list RLs and MDLs do not need to be reported on USEPA form 3320-1.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

#### **B. Self Monitoring Reports (SMRs)**

- 1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
- 2. Monitoring results shall be submitted to the Regional Water Board as specified in Table E-9.
- 3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD and Total Suspended Solids, shall be determined and recorded as needed to demonstrate compliance.

4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.
5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.
6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Dr., Suite #200  
Rancho Cordova, CA 95670-6114

8. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-9. Monitoring Periods and Reporting Schedule**

<b>Sampling Frequency</b>	<b>Monitoring Period Begins On...</b>	<b>Monitoring Period</b>	<b>SMR Due Date</b>
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 <sup>st</sup> day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	45 days from the end of the monitoring period
Semiannually	Closest of 1 January or 1 July following permit effective date	1 January through 31 December	45 days from the end of the monitoring period
Annually	January 1 following (or on) permit effective date	January 1 through December 31	45 days from the end of the monitoring period

### **C. Discharge Monitoring Reports (DMRs)**

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	FedEx/UPS/ Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15 <sup>th</sup> Floor Sacramento, CA 95814

- All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated cannot be accepted unless they follow the exact same format as EPA form 3320-1.

#### D. Other Reports

- Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

**Table E-10. Reporting Requirements for Special Provisions Progress Reports**

Special Provision	Reporting Requirements
Salinity Evaluation and Minimization Plan	<b>9 Months</b> , after date of permit adoption
Reuse of Municipal Wastewater Reuse Study	<b>12 Months</b> , after date of permit adoption
Receiving Water Temperature Study	Submit as part of the Report of Waste Discharge for Renewal

- Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board.
- The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such

as wet wells, regulated impoundments, tanks, highlines, *etc.*) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.

4. **Annual Operations Report.** By **1 February** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
- a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
  - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
  - c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
  - d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
  - e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

## ATTACHMENT F – FACT SHEET

### Table of Contents

Attachment F – Fact Sheet.....	F-3
I. Permit Information .....	F-3
II. Facility Description .....	F-4
A. Description of Wastewater and Biosolids Treatment or Controls .....	F-4
B. Discharge Points and Receiving Waters.....	F-6
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data .....	F-6
D. Compliance Summary.....	F-7
E. Planned Changes .....	F-7
III. Applicable Plans, Policies, and Regulations.....	F-7
A. Legal Authority.....	F-8
B. California Environmental Quality Act (CEQA) .....	F-8
C. State and Federal Regulations, Policies, and Plans .....	F-8
D. Impaired Water Bodies on CWA 303(d) List .....	F-10
E. Other Plans, Policies and Regulations.....	F-11
IV. Rationale For Effluent Limitations and Discharge Specifications.....	F-11
A. Discharge Prohibitions .....	F-12
B. Technology-Based Effluent Limitations.....	F-12
1. Scope and Authority .....	F-12
2. Applicable Technology-Based Effluent Limitations.....	F-13
C. Water Quality-Based Effluent Limitations (WQBELs).....	F-14
1. Scope and Authority .....	F-14
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives.....	F-15
3. Determining the Need for WQBELs.....	F-16
4. WQBEL Calculations .....	F-29
5. Whole Effluent Toxicity (WET).....	F-32
D. Final Effluent Limitations.....	F-33
1. Mass-based Effluent Limitations.....	F-33
2. Averaging Periods for Effluent Limitations.....	F-33
3. Satisfaction of Anti-Backsliding Requirements.....	F-34
4. Satisfaction of Antidegradation Policy .....	F-35
E. Interim Effluent Limitations – Not applicable .....	F-36
F. Land Discharge Specifications – Not Applicable.....	F-36
G. Reclamation Specifications – Not Applicable.....	F-36
V. Rationale for Receiving Water Limitations.....	F-36
A. Surface Water.....	F-37
B. Groundwater.....	F-40
VI. Rationale for Monitoring and Reporting Requirements.....	F-40
A. Influent Monitoring .....	F-40
B. Effluent Monitoring .....	F-40
C. Whole Effluent Toxicity Testing Requirements .....	F-41
D. Receiving Water Monitoring.....	F-41
1. Surface Water.....	F-41
2. Groundwater – Not Applicable.....	F-41

E. Other Monitoring Requirements.....	F-41
VII. Rationale for Provisions.....	F-42
A. Standard Provisions.....	F-42
B. Special Provisions.....	F-42
1. Reopener Provisions .....	F-42
2. Special Studies and Additional Monitoring Requirements .....	F-43
3. Best Management Practices and Pollution Prevention .....	F-46
4. Construction, Operation, and Maintenance Specifications .....	F-47
5. Special Provisions for Municipal Facilities (POTWs Only).....	F-48
6. Other Special Provisions .....	F-48
7. Compliance Schedules – Not Applicable.....	F-48
VIII. Public Participation.....	F-49
A. Notification of Interested Parties .....	F-49
B. Written Comments .....	F-49
C. Public Hearing .....	F-49
D. Waste Discharge Requirements Petitions.....	F-50
E. Information and Copying.....	F-50
F. Register of Interested Persons .....	F-50
G. Additional Information .....	F-50

### List of Tables

Table F-1. Facility Information .....	F-3
Table F-2. Historic Effluent Limitations and Monitoring Data.....	F-6
Table F-3. Summary of Technology-based Effluent Limitations .....	F-14
Table F-4. Salinity Water Quality Criteria/Objectives .....	F-26
Table F-5. WQBEL Calculations for Ammonia.....	F-31
Table F-6. WQBEL Calculations for Dibromochloromethane.....	F-31
Table F-7. WQBEL Calculations for Dichlorobromomethane.....	F-31
Table F-8. Summary of Water Quality-based Effluent Limitations .....	F-32
Table F-9. Summary of Final Effluent Limitations .....	F-35

## ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	5A290104001
<b>Discharger</b>	Nevada County Sanitation District No. 1
<b>Name of Facility</b>	Lake Wildwood Wastewater Treatment Plant
<b>Facility Address</b>	12622 Pleasant Valley Road
	Penn Valley, CA 95946
	Nevada County
<b>Facility Contact, Title and Phone</b>	Chad McBride, Plant Operator, (530) 432-3767
<b>Authorized Person to Sign and Submit Reports</b>	Mark Miller, Director of Sanitation, (530) 265-1351
<b>Mailing Address</b>	950 Maidu Avenue, Nevada City, CA 95969
<b>Billing Address</b>	Same
<b>Type of Facility</b>	Publicly Owned Treatment Works
<b>Major or Minor Facility</b>	Major
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	N
<b>Reclamation Requirements</b>	N/A
<b>Facility Permitted Flow</b>	1.12 million gallons per day (mgd) Average Dry Weather Flow
<b>Facility Design Flow</b>	1.12 million gallons per day (mgd) Average Dry Weather Flow
	2.40 million gallons per day (mgd) Peak Month Wet Weather Flow
<b>Watershed</b>	Englebright Dam to Feather River Hydrologic Area (515.3) within the Sacramento Hydrologic Basin
<b>Receiving Water</b>	Deer Creek
<b>Receiving Water Type</b>	Inland Surface Water

- A. Nevada County Sanitation District No. 1 (hereinafter Discharger) is the owner and operator of Lake Wildwood Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works Facility.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B. The Facility discharges wastewater to Deer Creek, a water of the United States and a tributary to the Yuba River, and is currently regulated by Order No. R5-2002-0093, which was adopted on 7 June 2002 and expired on 7 June 2007. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on 19 December 2006. Supplemental information was requested on 10 October 2007 and received on 12 October 2007. A site visit was conducted on 10 October 2007, to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the community of Lake Wildwood and Wildwood Estates Subdivisions and serves a population of approximately 7000. The wastewater treatment plant (WWTP) design average dry weather flow capacity is 1.12 mgd.

### A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at the Facility consists of preliminary screening, equalization basin, secondary treatment with anoxic basins, pre-aeration basins, oxidation ditches, clarification, mixed media filtration, disinfection with chlorine gas, and dechlorination with sulfur dioxide prior to discharge in Deer Creek. Solid handling processes include sludge thickening followed by centrifuge dewatering.

The process flow diagram for WWTP is shown in Attachment C: Raw wastewater enters the plant headwork and is mechanically screened by an auger-type fine screen to remove coarse solids, such as rags and other objects that could damage downstream equipment or interfere with treatment. The mechanical fine screen was installed in 2001 and has sufficient capacity to handle peak hourly flows (2.4 mgd). When the mechanical screen needs to be taken out of service for maintenance, backup screening is provided by a manually cleaned bar screen. Flow is measured with a Parshall flume and then diverted to the equalization basin by gravity in a 16-inch sewer.

Wastewater from the equalization basin is pumped into the oxidation ditch flow splitter box and directed to anoxic basins where nitrate contained in return sludge and mixture of wastewater and microorganisms is reduced to nitrite and then converted to nitrogen gas and released to the atmosphere. Wastewater from the anoxic basin is aerated before going to the oxidation ditches.

The WWTP has two oxidation ditches equipped with two mechanical brush aerators in each ditch. The oxidation ditches provide extended aeration to activated sludge secondary treatment. In the oxidation ditches, biologically degradable organics are metabolized by microorganisms in the presence of oxygen to synthesize more microorganisms. Microbial metabolism and synthesis removes soluble BOD from the wastewater. The brush aerators provide oxygen to the wastewater and keep the ditch contents thoroughly mixed so that the microorganisms do not settle to the bottom of the ditch.

From the oxidation ditches, this mixture of wastewater and microorganisms, termed "mixed liquor" flows to two secondary clarifiers for final settling. Normally, wastewater flows from Oxidation Ditch No. 1 to Clarifier No. 1 and from Oxidation Ditch No. 2 to Clarifier No. 2. A cross connection exists prior to the clarifiers, allowing flow from both oxidation ditches to go to only one clarifier. A portion of the settled solids is pumped back to the headwork to maintain a high concentration of metabolically active microorganisms in the oxidation ditches. The settled solids that are returned to the oxidation ditches (via the headwork) are termed return activated sludge (RAS). Each clarifier has a dedicated pump, which typically pumps RAS at 30 to 70 percent of the average influent flows. The remainder of the settled microbial mass that is not returned to the oxidation ditches, termed waste activated sludge (WAS), is wasted to the sludge treatment facilities along with floating scum material that is scraped off the top of the clarifiers. The plant has periodically experience poorly settling sludge causing elevated solids within the secondary effluent. However, current secondary process operation (two ditches in service, longer sludge ages, sequencing of aerators) has improved clarifier performance.

Effluent from the clarifiers flows to the filter influent sump and is pumped to four parallel mixed media filters. The pressure filters consisting of 30-inches, total, of anthracite coal over smaller silica sand media, over even smaller garnet sand media, all supported on a bed of silica gravel. The filters remove most of the particulate solids that can escape from the clarifiers, reducing the suspended solids content in the effluent. The filters were designed to treat flows up to 1.12 mgd when one of the filters is offline. Higher flows (in excess of the filter influent pumps) are bypassed around the filters directly to disinfection.

Filter effluent is disinfected with gaseous chlorine and dechlorinated with sulfur dioxide. The chlorine contact basin provides 35 minutes of contact time at the peak hour flow of 2.4 mgd. After disinfection and dechlorination, the treated effluent is discharged to Deer Creek.

Scum and WAS from the clarifiers are pumped to the aerated sludge storage basin and thickener. This basin originally was the aerobic package plant for the WWTP prior to the need for the much larger oxidation ditches. The sludge storage basin/thickener stores, aerates, and thickens the sludge to 0.25 to 2 percent solids. From the thickener, sludge is pumped to a centrifuge for dewatering. The centrifuge dewateres the sludge to approximately 20 percent solids. The dewatered sludge is conveyed to a storage bin for eventual off-site disposal.

## B. Discharge Points and Receiving Waters

1. The Facility is located in Section 20, T16N, R7E, MDB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point 001 to Deer Creek, a water of the United States [and a tributary to Yuba River, Englebright Dam to Feather River Hydrologic Area (515.3) within the Sacramento Hydrologic Basin] at a point latitude 39°, 14', 00" N and longitude 121°, 13', 22" W.

## C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data prior to plant upgrades from the term of the previous Order are as follows:

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation			Monitoring Data From January 2004 – To May 2006		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Average Weekly	Maximum Daily
BOD	mg/L	10	15	30	--	--	9.4
Chlorine Residual	mg/L	--	0.01	0.02	--	--	0.01
Settleable Solids	ml/L	0.1	--	0.2	0.05	--	0.05
Total Suspended Solids	mg/L	10	15	30	--	--	11
Ammonia	mg/L	Temp/pH Dependent Floating Limit		pH Dependent Floating Limit			1.0
Nitrite	mg/L	1	--	--	0.5	--	--
Nitrate+Nitrite	mg/L	10	--	--	23	--	--
Total Coliform	MPN/100 ml	2.2	--	--	24	--	--
Turbidity	NTU	3	--	10	--	--	58

In addition to the above, the effluent shall not exceed the following limitations from 1 June 2006 forward:

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2006 – August 2007)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly	Highest Average Weekly	Maximum Daily
BOD	mg/L	10	15	30	--	--	6.5
Chlorine Residual	mg/L	--	0.01	0.02	--	--	0.01
Settleable Solids	ml/L	0.1	--	0.2	0.05	--	0.05
Total Suspended Solids	mg/L	10	15	30	--	--	10
Nitrite	mg/L	1	--	--	0.2	--	--
Nitrate+Nitrite	mg/L	10	--	--	27.1	--	--
Total Coliform	MPN/100 ml	--	2.2	23	--	--	500
Turbidity	NTU	2	--	5	--	--	22.8

#### D. Compliance Summary

1. The Discharger's monthly monitoring data, partially summarized in Table F-2 above, showed that the discharger had difficulty complying with effluent limitations for turbidity, total coliform, pH, , nitrate, and temperature. The Discharger has completed plant upgrades and some treatment components have been operating for over 1 year. Monitoring data for the first year of operation indicates the upgrades have resulted in compliance with effluent limitations.

#### E. Planned Changes

The Discharger is proposing to replace the existing chlorine disinfection system with a UV disinfection system. Provisions have been included in this Order for operation of a UV disinfection system when it becomes operational. Elimination of chlorine should eliminate the formation of chlorine byproducts chloroform, dibromochloromethane, and dichlorobromomethane. On 1 August 2008 the Discharger submitted a Revised Infeasibility Report, which included a proposed time schedule for constructing and the proposed UV disinfection facilities. The schedule for compliance is included in a Time Schedule Order proposed for adoption concurrent with this Order.

### III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements

(Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

**A. Legal Authority**

See Limitations and Discharge Requirements - Findings, Section II.C.

**B. California Environmental Quality Act (CEQA)**

See Limitations and Discharge Requirements - Findings, Section II.E.

**C. State and Federal Regulations, Policies, and Plans**

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised October 2007), for the Sacramento and San Joaquin River Basins* (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. The beneficial uses of the Deer Creek downstream of the discharge are agricultural irrigation, agricultural stock watering, hydropower generation, water contact recreation, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, cold fish migration habitat, warm spawning habitat, and wildlife habitat.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*" and with respect to disposal of wastewaters states that "*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

The federal CWA section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 CFR 131.3(e), defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

This Order contains Effluent Limitations requiring a tertiary level of treatment, or equivalent, which is necessary to protect the beneficial uses of the receiving water. The Regional Water Board has considered the factors listed in CWC section 13241 at the time of adoption of the previous Order No. 2002-0093 which initially established tertiary level effluent limitations for protection of beneficial of the receiving water, as discussed in more detail in the Fact Sheet, Attachment F, Section IV.

2. **Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.) the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16.
3. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Compliance with the anti-backsliding requirements is discussed in Section IV.D.3.
4. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a), California Water Code, requires that *"the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective"*.

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this facility. Therefore, a reasonable potential analysis based on information from Emergency Planning and Community Right to Know Act (EPCRA) cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to CWC section 13263.6(a).

However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

5. **Stormwater Requirements.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. The facility average dry weather flow capacity is greater than 1 MGD, therefore the facility is subject to the General ISW permit.
6. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

#### D. Impaired Water Bodies on CWA 303(d) List

1. Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 30 November 2006 USEPA gave final approval to California's 2002 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "*...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" Deer Creek below the discharge is not listed as a WQLS in the 303(d) list of impaired water bodies, however the Feather River and Sacramento/San Joaquin Delta waters are listed for mercury.
2. **Total Maximum Daily Loads.** The USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and water body combination. No TMDLs are scheduled for Deer Creek (Nevada County) or the Yuba River.

### E. Other Plans, Policies and Regulations

1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:
  - a. The waste consists primarily of domestic sewage and treated effluent;
  - b. The waste discharges are consistent with and have no potential to cause groundwater to exceed water quality objectives; and
  - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

### IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that *"are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality."* Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that *"[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."*

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative

water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives" that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives.*" This Policy complies with 40 CFR §122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e.*, water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

#### **A. Discharge Prohibitions**

1. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 22.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

#### **B. Technology-Based Effluent Limitations**

##### **1. Scope and Authority**

Regulations promulgated in section 125.3(a)(1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and pH.

## **2. Applicable Technology-Based Effluent Limitations**

- a. **BOD<sub>5</sub> and TSS.** Federal Regulations, 40 CFR, Part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD<sub>5</sub> and TSS. Tertiary treatment is necessary to protect the beneficial uses of the receiving stream and the final effluent limitations for BOD<sub>5</sub> and TSS are based on the technical capability of the tertiary process. BOD<sub>5</sub> is a measure of the amount of oxygen used in the biochemical oxidation of organic matter. The secondary and tertiary treatment standards for BOD<sub>5</sub> and TSS are indicators of the effectiveness of the treatment processes. The principal design parameter for wastewater treatment plants is the daily BOD<sub>5</sub> and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD<sub>5</sub> and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels for BOD<sub>5</sub> and TSS than the secondary standards currently prescribed; the 30-day average BOD<sub>5</sub> and TSS limitations have been revised to 10 mg/L, which is technically based on the capability of a tertiary system. In addition to the average weekly and average monthly effluent limitations, a daily maximum effluent limitation for BOD<sub>5</sub> and TSS is included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. See Table F-3 for final technology-based effluent limitations required by this Order. In addition, 40 CFR 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. If 85 percent removal of BOD<sub>5</sub> and TSS must be achieved by a secondary treatment plant, it must also be achieved by a tertiary (i.e., treatment beyond secondary level) treatment plant. This Order contains a limitation requiring an average of 85 percent removal of BOD<sub>5</sub> and TSS over each calendar month.

Final discharge limitations in this Order are based on the technical capability of tertiary wastewater treatment systems. Technology-based limitations are utilized to assure the treatment systems are properly designed and operated. Discharge limitations have been established for tertiary treatment or equivalent as 10 mg/L (monthly average), 15 mg/L (weekly average) and 30 mg/L (daily maximum) for

both BOD and TSS when dilution is less than 20 to 1, receiving water flow to effluent flow.

- b. **Flow.** The Lake Wildwood WTP was designed to provide a tertiary level of treatment for up to a design flow of 1.12 mgd. Therefore, this Order contains an Average Dry Weather Flow effluent limit of 1.12 mgd.
- c. **pH** Federal Regulations, 40 CFR Part 133, also establish technology-based effluent limitations for pH. The secondary treatment standards require the pH of the effluent to be no lower than 6.0 and no greater than 9.0 standard units. This Order contains an effluent pH limitation of 6.5 to 8.0 to assure compliance with receiving water objectives.

### Summary of Technology-based Effluent Limitations Discharge Point 001

**Table F-3. Summary of Technology-based Effluent Limitations**

Parameter	Units	Effluent Limitations			
		Monthly Average	Weekly Average	Daily Maximum	Daily Average
Average Dry Weather Flow	mgd	--	--		1.12
BOD, 5-day @ 20°C	mg/L	10	15	30	--
	lbs/day <sup>1</sup>	93	140	280	--
Total Suspended Solids	mg/L	10	15	30	--
	lbs/day <sup>1</sup>	93	140	280	--

<sup>1</sup> Based upon an average dry weather flow of 1.12 mgd.

**Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.

### C. Water Quality-Based Effluent Limitations (WQBELs)

#### 1. Scope and Authority

As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an in-stream excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.